AMENDMENTS TO THE CLAIMS

Please amend the paragraph beginning on page 15, line 27 as follows:

To investigate whether the epitope SF2-Pol424-9 (SEQ ID NO: 1) of the present invention and two known epitopes were generally and intensively presented in HIV-1 infected patients carrying HLA-A*1101, peripheral blood monocytes (PBMCs) from six HIV-1 seropositive patients carrying HLA-A*1101 were cultured for one week with the peptide of the present invention and Pol313-321 (AIFQSSMTK) (SEQ ID NO:9) (J. Immunol 159, 1648-1657, 197) and Pol496-505 (HIV Sequence Database, Los Alamos National Laboratory, Los Alamos, 1997) known to be HLA-A*1101 restricted HIV-1 specific CTL epitopes. These cells were used as effector cells, and C1R-A*1101 and C1R cells previously pulsed with the corresponding peptide were used as target cells, to determine the CTL activity. The results are shown in Table 1A and 1B.

Please amend Table 1A on page 15 as follows:

Table 1A. Induction of the specific CTL by a single stimulation with the peptides in PBL from HIV-seropositive patients carrying HLA-A11

		IU		TAK		KOG	
peptide	sequence	40:1*	5:1	40:1	5:1	40:1	5:1
SF2-Pol424-9	QIYAGIKVK (SEQ ID NO:1)	**27.4****	**11.7**	2.3	2.0	-0.2	3.1
Pol496-505	IYQEPFKNLK (SEQ ID NO:8)	8.00	4.6	12.9	3.0	-0.6	-2.9
Pol313-321	AIFQSSMTK (SEQ ID NO:9)	**53.5**	**26.8**	0.7	1.1	**13.6**	3.7
Env77-85***	DPNPQEVVL (SEQ ID NO:10)	2.5	1.5	0.5	0.0	0.2	-0.1

Please amend Table 1A on page 15 as follows:

Table 1B:continued from Table 1A

		SKG		SSK		SZK	
peptide	sequence	40:1	5:1	40:1	5:1	40:1	5:1
SF2-Pol424-9	QIYAGIKVK (SEQ ID NO:1)	-3.7	-1.7	7.0	-3.3	4.9	-0.2
Pol496-505	IYQEPFKNLK (SEQ ID NO:8)	4.9	-2.8	5.1	3.2	2.5	2.6
Pol313-321	AIFQSSMTK (SEQ ID NO:9)	2.8	-3.7	-2.4	2.3	**31.1**	8.2
Env77-85***	DPNPQEVVL (SEQ ID NO:10)	1.7	-3.6	-0.3	-2.8	-1.1	-0.4

Please amend the paragraph beginning on page 17, line 17 as follows:

Pol 675-9-5E could induce the specific CTL from five of seven patients, Pol 675-9-5K8E could induce the specific CTL from two of six, Nef 84-9-2F6F could induce the specific CTL from six of seven, Gag 349-11-9S could induce the specific CTL from three of seven and Nef 84-9-2L could induce the specific CTL from three of five patients. Peptides from subtype E could not be recognized by corresponding subtype B specific CTLs, and also peptides subtype E specific CTLs did not recognize subtype B peptides. This indicated that these peptides are subtype E specific epitopes. Additionally, among five patients who were HLA-A11 positive and infected with HIV-1 subtype B, there was one patient in whom the specific CTL could be induced by Nef 84-9 (AVDLSHFLK) (SEQ ID NO: 11) (J. Immunol 146: 1560-1565, 1991) but not by Nef 84-9-2L. To the contrary, there was also one patient in whom specific CTL could be induced by Nef 84-9-2L but not by Nef 84-9 (Table 4). This makes one to believe that Nef 84-9-2L is the epitope distinct from Nef 84-9.

Please amend Table 3A on page 18 as follows:

Table 3A. Induction of the specific CTL after a single stimulation with the peptides in peripheral blood monocytes (PBLMC) from HIV-subtype E-seropositive patients carrying HLA-A11

		HIV-1 infected patient			
peptide	sequence	TT-005	TT-007	TT-008	TT-009
Pol 675-9-5E	QIIEELIKK (SEQ ID NO:3)	3.4*	55.1	23.4	63.8
Pol 675-9-5K8E	QIIEKLIEK (SEQ ID NO:4)	-4.1	21.7	10.3	4.5
Nef 84-9-2F6F	AFDLSFFLK (SEQ ID NO:6)	-1.3	24.6	75.5	76.5
Gag 349-11-9S	ACQGVGGPSHK (SEQ ID NO:5)	4.0	84.3	82.9	40.4

Please amend Table 3B on page 18 as follows:

Table 3B. Continued from table 3A

		HIV-1 infected patient		
peptides	sequence	TU-002	TU-003	TU-007
Pol 675-9-5E	QIIEELIKK (SEQ ID NO:3)	3.4	0.2	5.7
Pol 675-9-5K8E	QIIEKLIEK (SEQ ID NO:4)	5.6	-5.6	-
Nef 84-9-2F6F	AFDLSFFLK (SEQ ID NO:6)	15.4	41.2	64.2
Gag 349-11-9S	ACQGVGGPSHK (SEQ ID NO:5)	3.9	-2.8	3.4

Please amend Table 4 on pages 18-19 as follows:

Table 4. Induction of the specific CTL after a single stimulation with the peptides in peripheral blood monocytes (PBLMC) from HIV-subtype B-seropositive patients carrying HLA-A11

		HIV-1 infected patient				
peptide	sequence	KI-005	KI-015	KI-035	KI-030	KI-036
Nef 84-9	AVDLSHFLK (SEQ ID NO:11)	25.3*	68.6	5.8	6.6	16.5
Nef 84-9-2L	ALDLSHFLK (SEQ ID NO:7)	68.3	6.3	16.4	5.5	50.4

Please delete the substitute Sequence Listing submitted on November 28, 2001.

Page 21 (Abstract), after the last line, beginning on a new page, please insert the attached substitute Sequence Listing.

AMENDMENTS TO THE CLAIMS

1. (Withdrawn) A peptide selected from the group of peptides consisting of the amino acid sequence given in SEQ ID NO: 1 to SEQ ID NO: 7 wherein said peptide can induce a cytotoxic CTL targeting to a HIV infected cell.

2. (Currently Amended) A DNA molecule coding for ~~the~~ a peptide ~~of claim 1~~ having an amino acid sequence selected from the group consisting of SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, and SEQ ID NO: 7.

3. (Withdrawn) A medicament for preventing and/or treating of AIDS, comprising the peptide of claim 1, a pharmaceutically acceptable carrier and/or a diluent.

4. (New) The DNA molecule of Claim 2, wherein said DNA molecule codes for a peptide having an amino acid sequence of SEQ ID NO: 4.

5. (New) The DNA molecule of Claim 4, wherein the codon usage of the DNA molecule is optimized for the cell used for expression of said DNA molecule.

6. (New) A host cell comprising the DNA molecule of Claim 5.

7. (New) A host cell comprising the DNA molecule of Claim 4.

8. (New) An expression vector comprising the DNA molecule of Claim 4.

9. (New) A complementary DNA molecule that hybridizes with the DNA molecule of Claim 4 under stringent conditions.

10. (New) The complementary DNA molecule of Claim 9, wherein said stringent conditions comprise:

annealing at 20-25°C below the melting temperature, Tm, in 2 x SSC, wherein Tm is determined by the equation:

$(Tm = 81.5°C + \log_{10}[Na^+]+0.41(G+C \text{ content } \%) - (600/\text{sequence length}))$,

and washing at 12-20°C below the Tm with a salt concentration of 0.1 x SSC.

11. (New) A method of inducing cytotoxic CTL targeting to a HIV infected cell comprising:

expressing the DNA molecule of Claim 4 in a host cell to produce a peptide of SEQ ID NO: 4;

obtaining said peptide of SEQ ID NO: 4;

administering said peptide of SEQ ID NO: 4 to a subject in need thereof.

12. (New) The method of Claim 11, wherein said administering comprises a method selected from the group consisting of injection, aerosol, and transdermal application.

SUPPORT FOR THE AMENDMENT

Claim 2 has been amended.

Claims 4-12 have been added.

The amendment of Claim 2 and new Claim 4 are supported by Claims 1 and 2 as originally filed. New Claims 5-12 are supported by page 6, line 25 to page 10, line 5 of the specification as originally filed.

The specification has been amended to ensure that all disclosed sequences bear the appropriate sequence identifiers. In addition, Applicants submit herewith a substitute Sequence Listing, which includes all disclosed sequences.

No new matter is believed to have been entered by the present amendment.